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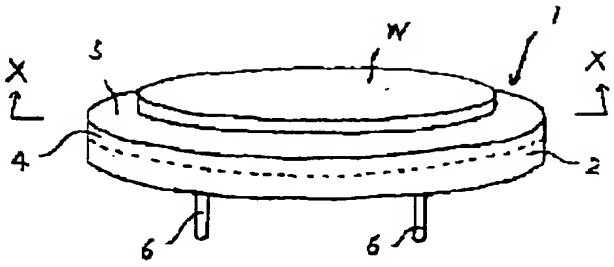
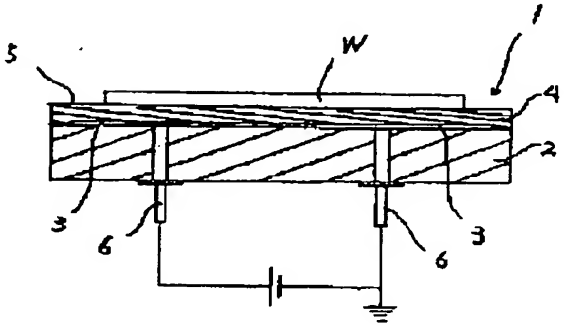
TITLE : ELECTROSTATIC CHUCK

(a)



(b)



ABSTRACT : PROBLEM TO BE SOLVED: To provide an electrostatic chuck having superior plasma resistance and superior corrosion resistance to a halogen system gas for fixing a sample by allowing an electrostatic absorbing force by a Johnsor-Rahbek force to appear in the entire temperature range of 300 to 500°C.

SOLUTION: An electrostatic absorbing electrode 3 is formed on a ceramic substrate 2, and a ceramic dielectric layer 4 is covered integrally on the ceramic substrate 2 so that the electrostatic absorbing electrode 3 can be covered, and the upper face of the ceramic dielectric layer 4 is formed as the holding face of a sample W in this electrostatic chuck 1. At least, the ceramic dielectric layer 4 is formed of an aluminum sintered body, in which an aluminum content is 99 wt.% or higher, and an aluminum mean crystal grain diameter is 1-3 μm, and porosity is 0.5% or less, and the volumetric intrinsic resistance value of the aluminum sintered body, constituting the ceramic dielectric layer 4 is set 1×10^{8}-10^{11} Ω.cm in a temperature range ranging from 300 to 550 °C. Thus, a sample W can be absorbed and fixed by causing a Jhonson-Rahbek force to appear.